Section 5 Contents

Water Supply and Use

5.1 Introduction

This section discusses the present water supply and use from surface water tributary inflows as well as the groundwater reservoirs. There is a surface water transbasin diversion from the Santa Clara River into Pinto Creek. There is a natural groundwater inflow from the Sevier River drainage on the Markagunt Plateau into the Cedar City-Paragonah area.

5.2 Background

The base period for determining the surface water supply is water years 1941 through 1990. Some of the groundwater recharge and discharge data are discussed for different time periods. These will vary depending on the reports used. These reports were published by the U.S. Geological Survey, the Division of Water Resources or Division of Water Rights covering the various studies where this information was determined.

The Beaver River and its tributaries, with headwaters in the Tushar Mountains, produces the largest volume of water in the basin. Hydrologically, the surface water flows of the Beaver River system are separate from the balance of the Cedar/Beaver Basin. Parowan Creek and Coal Creek produce moderate amounts of water, primarily because their drainage areas are smaller. Pinto Creek and Shoal Creek are the principal sources of surface water along the southern boundaries of the basin.

Many normally dry drainages experience high volume-short duration flood flows produced by high intensity cloudburst storms. These can occur at any location within the basin and cause considerable damage in the more populated areas.

The primary use of water is for irrigation. When the first settlers arrived, diversion of water for irrigation was one of the first activities undertaken.

Culinary water supplies originally came from individual wells or nearby springs, although surface streams were often used. As populations grew, community systems were installed to pipe water from wells and springs.

■ The water supply comes primarily from precipitation, mostly in the form of snow during the winter months and summer-fall thunderstorms. A small amount comes from a surface water transbasin diversion and from groundwater transbasin inflow.

5.3 Water Supply

The Cedar/Beaver Basin does not have an abundant water supply. The erratic nature of heavy winter snows can easily double the annual snowpack or cut it drastically during mild winters with a resulting increase or decrease in the surface water runoff. The groundwater supply is similarly affected over a delayed period of time.

There is a direct relationship between surface water and groundwater. Surface water inflow is the major supply for groundwater reservoirs. Other sources include canal seepage and precipitation. Any change in the surface water runoff that discharges into a groundwater basin area will result in a change in the volume of groundwater recharge. If the groundwater reservoir is full, there will be groundwater outflow. There are situations where only part of the surface water will percolate downward while some of the balance will flow over the groundwater reservoir area and on downstream. This is the case in the upper Beaver River area.

The water requirements of upper watershed vegetation is a fairly constant demand that must be satisfied before there is surface water runoff or infiltration to the groundwater network. Any water not consumed produces surface water runoff or contributes to groundwater. The groundwater becomes the supply to seeps and springs on downstream. Warm season precipitation helps supply upper watershed vegetation demand, thus helping to augment late season downstream flows.

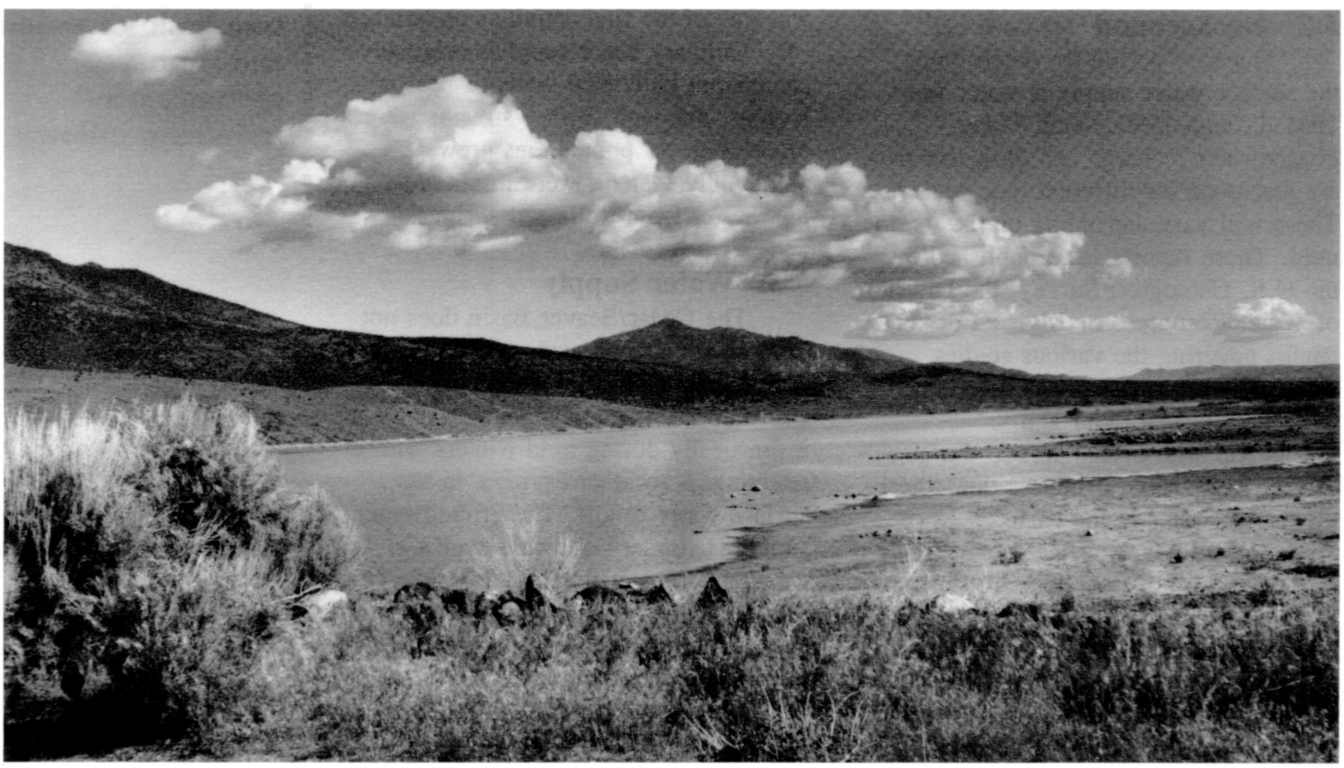
5.3.1 Surface Water supply

Most of the surface water runoff comes from snow-melt during the months of April, May and June although streams in the basin peak at different times depending on the watershed aspect, elevation and configuration. Where there are surface water storage reservoirs, some modification of the streamflow can be expected.

Part of the hydrologic drainage of the Cedar/Beaver Basin, 38,500 acres, is in Lincoln County, Nevada. A small part of this or about 2,180 acres, is in the Shoal Creek drainage. The balance of the area is in Gold Springs Wash, draining into the Modena area. There are no perennial streams in the Nevada portion of these drainages. The only water flowing into the downstream areas are snow-melt flows in the early spring and flood flows produced by summer thunderstorms or long duration rainstorms.

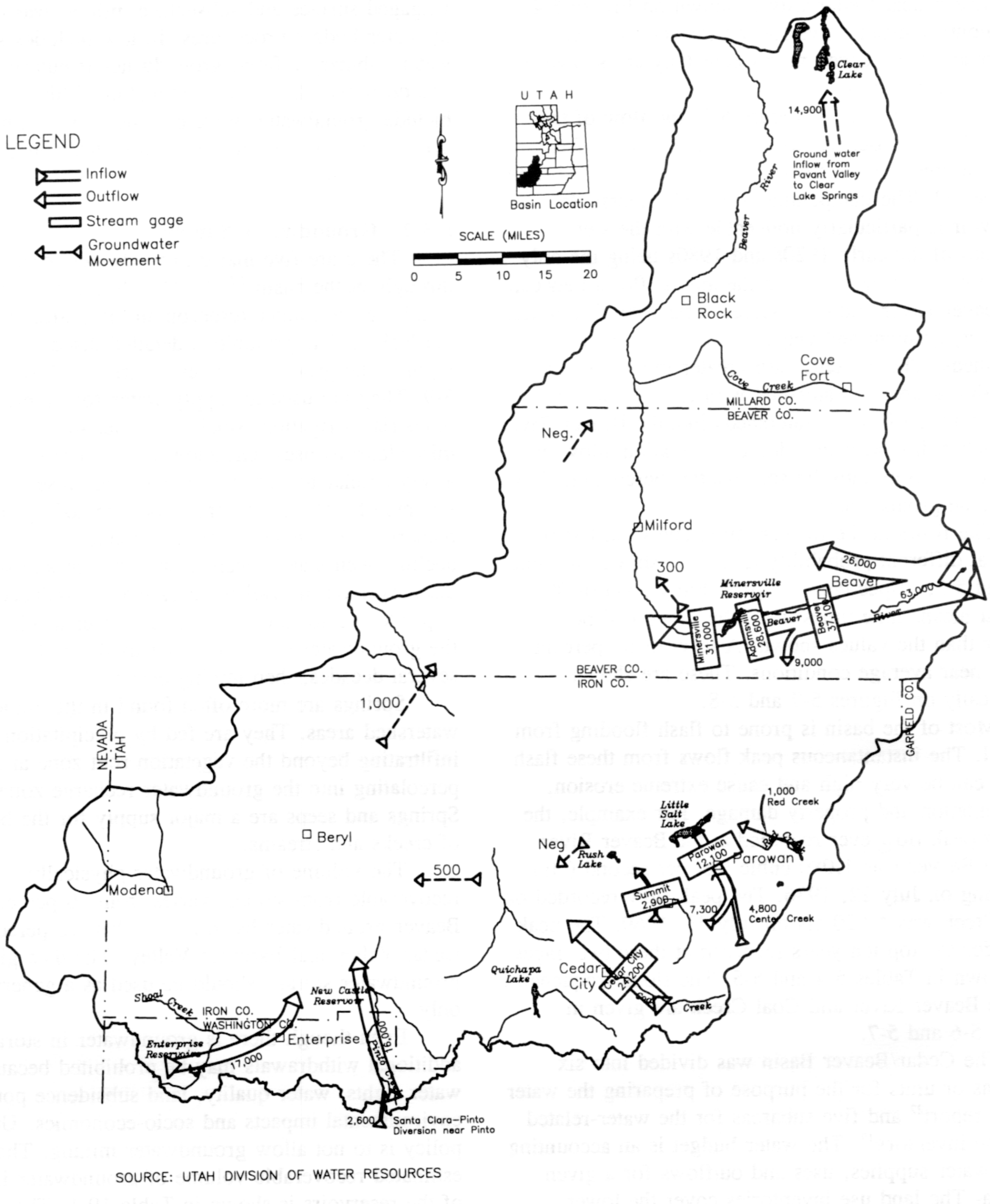
Figure 5-1 is a graphical representation of the average annual streamflows and stream depletions for the period 1941-1990 for the Cedar/Beaver Basin. The width of the arrows indicates the average annual flow volume. The volumes are derived or estimated from stream gage or other records by correlation. All of the stream gages are maintained and read by the U.S. Geological Survey.

The longest continuous stream gage record is on the Beaver River at Beaver. It is important because of the long uninterrupted record, from 1914 to the present time, and can be used to estimate and correlate other streamflow records where data is missing or non-existent. The record on Coal Creek runs from 1916 to



Minersville Reservoir

Figure 5-1
FLOW CHART
Cedar/Beaver Basin
1941-1990 Base Period (Acre-feet)



SOURCE: UTAH DIVISION OF WATER RESOURCES

1919 and from 1936 to the present. All of the annual and monthly mean flows for gaged streams are given in Table 5-1.The annual flows for the Beaver River at Beaver and Rocky Ford Dam (Minersville Reservoir) are shown on Figures 5-2 and 5-3.The annual flow of Coal Creek near Cedar City is shown on Figure 5-4. The monthly mean flows for the Beaver River at Beaver and Coal Creek near Cedar City are shown on Figures 5-5 and 5-6.

As can be seen on Figure 5-2, the flow of the Beaver River at Beaver does not change much from using the long-term historical average or the 1941-1990 base period. The dampening effect of Minersville Reservoir is particularly noticeable with the wet extremes of the early 1920s and 1980s being the only exceptions. The variations in the annual flows between the Beaver River and Coal Creek reflect the differences in aspect, gradient and vegetation between the two watersheds. The extremes are greater in Coal Creek, indicating a steeper watershed with less vegetative cover to retard flows. Watersheds like the Beaver River with flatter drainages and denser vegetation allow the water to infiltrate into the soil mantle, percolating down to become groundwater.

The flows at the Beaver River and Coal Creek gages at different probability levels are shown in Table 5-2 and 5-3, respectively. A probability level of 90 percent means nine times in 10 the flows will be greater than the values shown. A level of 50 percent means near average conditions. These are shown graphically on Figures 5-7 and 5-8.

Most of the basin is prone to flash flooding from rainfall. The instantaneous peak flows from these flash floods can be very high and cause extreme erosion, sedimentation and property damage. For example, the highest peak flow ever recorded at the Beaver River gage at Beaver was 1,080 cubic feet per second (cfs) occurring on July 22, 1936. The peak flow recorded on Coal Creek was 4,620 cfs on July 23, 1969. The peak flows for the top ten years recorded at these two gages are shown in Tables 5-4 and 5-5. The flood frequencies for the Beaver River and Coal Creek are given in Tables 5-6 and 5-7.

The Cedar/Beaver Basin was divided into six subareas or units for the purpose of preparing the water budget report[22] and five subareas for the water-related land use inventory[17]. The water budget is an accounting of the water supplies, uses and outflows for a given subarea. The land use inventories cover the lower valley areas where agricultural croplands and most of the cities and towns are located. The water budget base period is 1961-1990, although in some cases a different period is used because of data availability.

Water budget area inflow was determined from gage records along with various published reports and records compiled by water users. Missing streamflow data were estimated by statistical correlation methods. Ungaged surface and subsurface inflow, was estimated by water budget procedures. Inflow includes surface water tributary inflow, groundwater tributary inflow and deep percolation from irrigation. This does not include groundwater movement between basins. The average annual inflow for the six water budget areas is shown in Table 5-8.

5.3.2 Groundwater Supply

There are five major groundwater reservoirs throughout the basin.[7,31,44,45,46,47] In addition, there is a smaller groundwater reservoir in the Sulfurdale area but lack of data prohibits a detailed discussion in this report. The groundwater reservoirs are shown in Figure 5-9. They are used to supply water for municipal and industrial, irrigation, stock and other minor miscellaneous uses. Groundwater reservoirs function in a way similar to surface water storage reservoirs. The volume of water in storage is determined by the recharge and discharge. When groundwater levels decline, well water levels drop and seep and spring discharges on the valley floors may be reduced. The opposite is also true when groundwater levels raise. If the groundwater discharge exceeds the recharge over several decades, then mining occurs.

Springs are more often found in the higher watershed areas. They are fed by precipitation infiltrating beyond the vegetation root zone and percolating into the groundwater recharge zones. Springs and seeps are a major supply for the base flows of creeks and streams.

The volume of groundwater physically recoverable from storage varies from 60 percent in the Beaver groundwater basin to less than 10 percent in Cedar Valley and Parowan Valley. The data given for groundwater storage should be used as a general guide only.

Even though there is groundwater in storage, any additional withdrawals may be prohibited because of water rights, water quality, land subsidence potential, environmental impacts and socio-economics. Utah's policy is to not allow groundwater mining. The estimated recoverable volume of groundwater in each of the reservoirs is shown in Table 19-1. These values were estimated by the U.S. Geological Survey from studies conducted during the 1970s.

Table 5-1
MEAN MONTHLY AND ANNUAL STREAMFLOWS
(Acre-feet)

Number	Description	Years	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
09408500	Santa Clara-Pinto Diversion near Pinto	1954-1990	32	59	12	6	16	151	824	1101	381	11	23	0	2616
10234000	Three Creeks near Beaver	1947-1961	304	250	221	189	168	206	438	1,241	1,921	1,133	614	343	6,697
10234500	Beaver River near Beaver	1914-1993	1,449	1,285	1,197	1,119	1,054	1,381	3,274	10,698	9,112	3,846	2,266	1,530	38,116
10236000	North Fork North Creek near Beaver	1965-1976	104	101	100	85	89	212	517	1,336	951	241	120	87	3,631
10236500	South Fork North Creek near Beaver	1965-1976	284	230	227	181	197	436	1,180	4,402	3,835	1,307	519	292	12,068
10237000	Beaver River at Adamsville	1914-1993	1,198	2,465	2,571	2,428	2,440	2,693	1,960	5,040	4,767	976	978	670	28,109
10237500	Indian Creek near Beaver	1947-1949, 1965-1976	145	122	117	105	102	166	585	1,730	841	500	253	149	3,803
10238000	Indian Creek near Adamsville	1914-1916	145	78	25	30	397	214	337	399	131	377	280	291	2,407
10239000	Beaver River at Rocky Ford Dam Near Minersville	1914-1993	766	620	695	748	686	989	1,748	6,056	6,410	5,058	3,993	2,071	29,736
10239500	Minersville Canal at Minersville	1951-1955	117	121	96	91	109	103	214	2,408	2,040	1,718	1,642	731	8,329
10240000	Beaver River at Minersville, Utah	1910-1955	546	1,326	1,686	2,166	1,388	1,716	1,116	2,794	2,499	930	735	476	14,473
10241000	Beaver River near Milford	1952-1955	0	0	7	24	218	438	57	1,108	1,103	28	24	19	3,026
10241400	Little Creek near Paragonah	1960-1981	49	46	48	51	56	97	198	354	240	119	72	48	1,316
10241430	Red Creek near Paragonah	1965-1975	71	69	70	64	58	81	153	292	148	91	80	66	1,048
10241470	Center Creek above Parowan Creek near Parowan	1965-1986	316	280	282	280	248	290	376	569	670	675	432	330	4,750
10241500	Center Creek near Parowan	1943-1950	732	599	600	577	541	639	1,068	2,142	1,822	1,490	1,121	787	12,117
10241600	Summit Creek near Summit	1965-1986	119	108	103	94	89	125	309	1,345	628	223	151	113	3,405
10241800	Ashdown Creek near Cedar City	1958-1961	332	325	244	253	271	492	1,325	2,063	976	363	387	316	7,346
10242000	Coal Creek near Cedar City	1916-1919, 1936-1993	754	664	613	596	645	1,094	3,579	9,290	4,096	1,397	1,074	836	24,637
10242430	Grassy Creek near Enterprise	1965-1968	0	13	103	11	47	43	79	4	1	0	0	0	299

Figure 5-2
ANNUAL FLOWS
Beaver River at Beaver

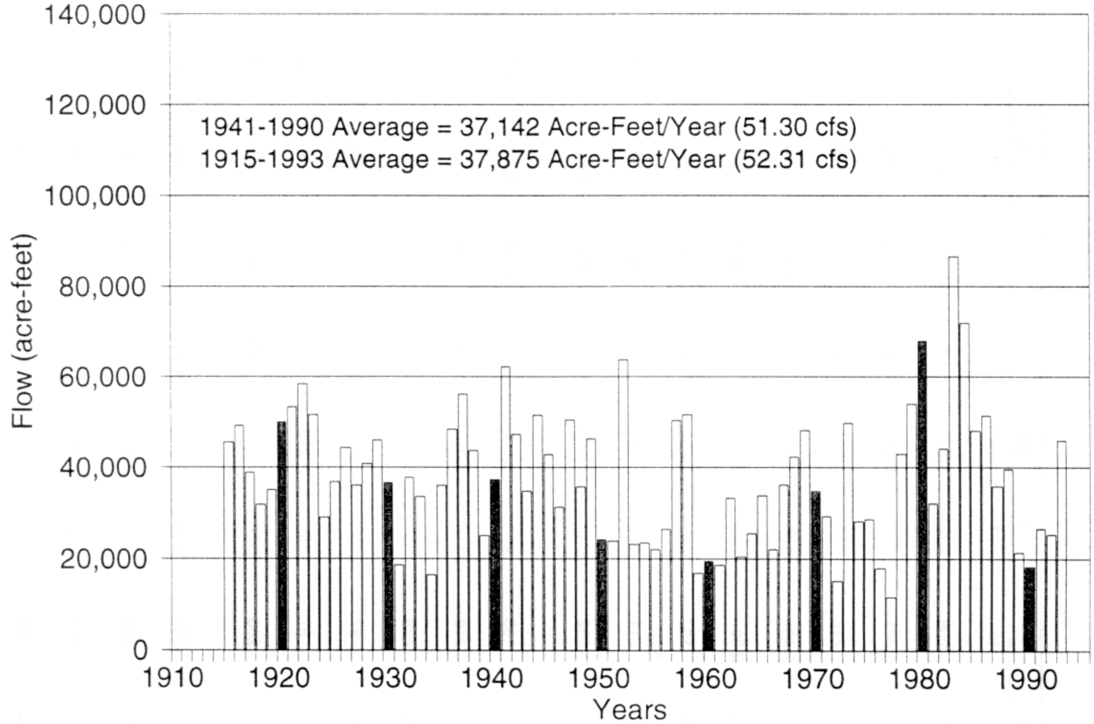


Figure 5-3
ANNUAL FLOWS
Beaver River at Rocky Ford Dam

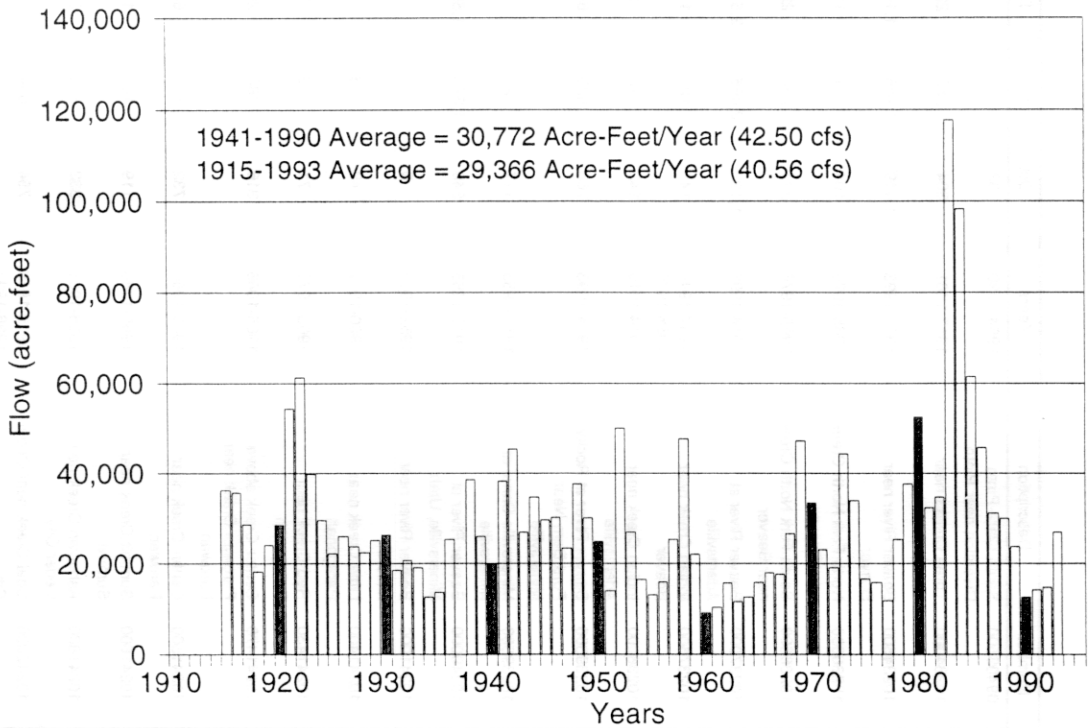


Figure 5-4
ANNUAL FLOWS
Coal Creek Near Cedar City

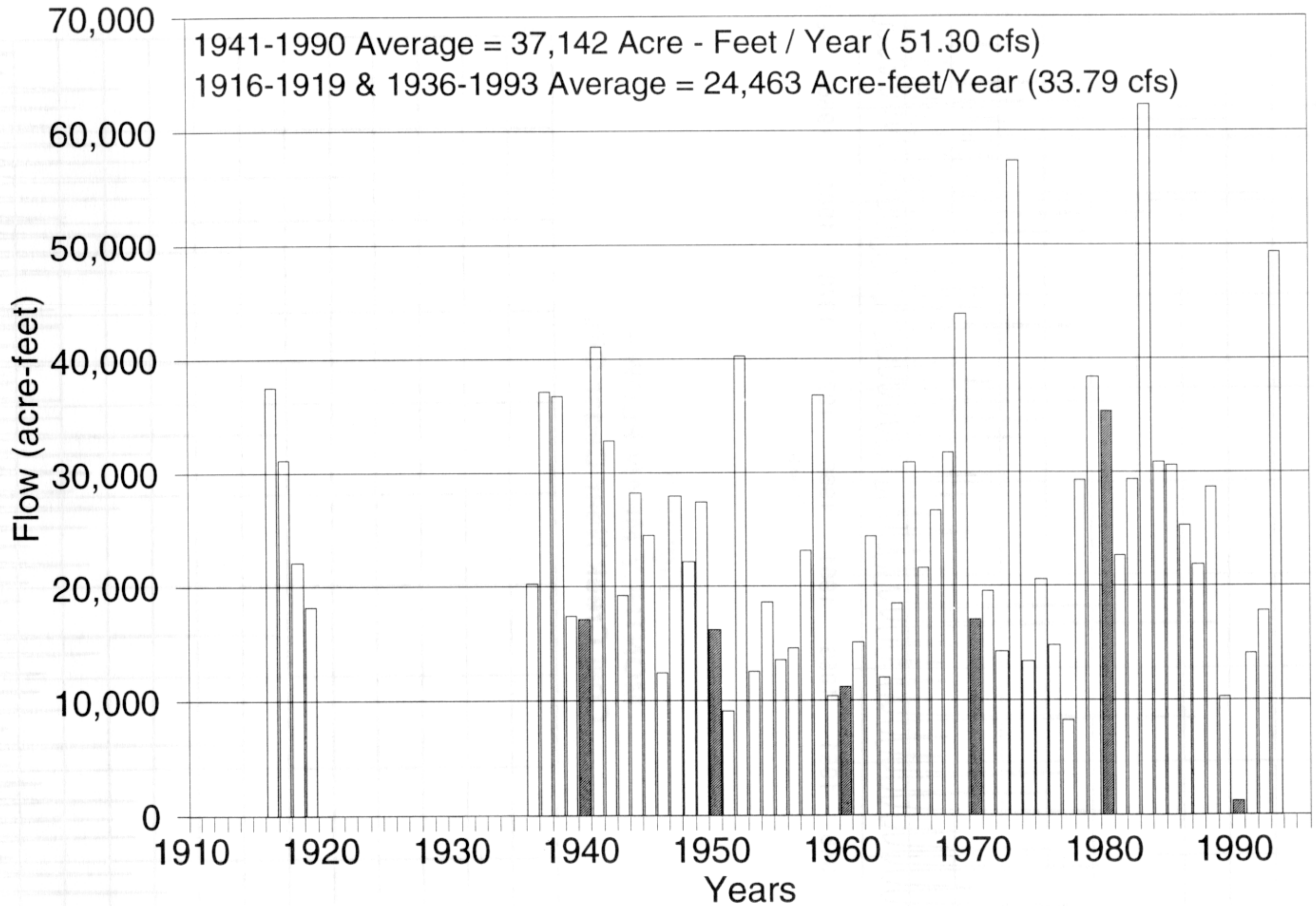


Figure 5-5
MONTHLY MEAN FLOWS
Beaver River at Beaver

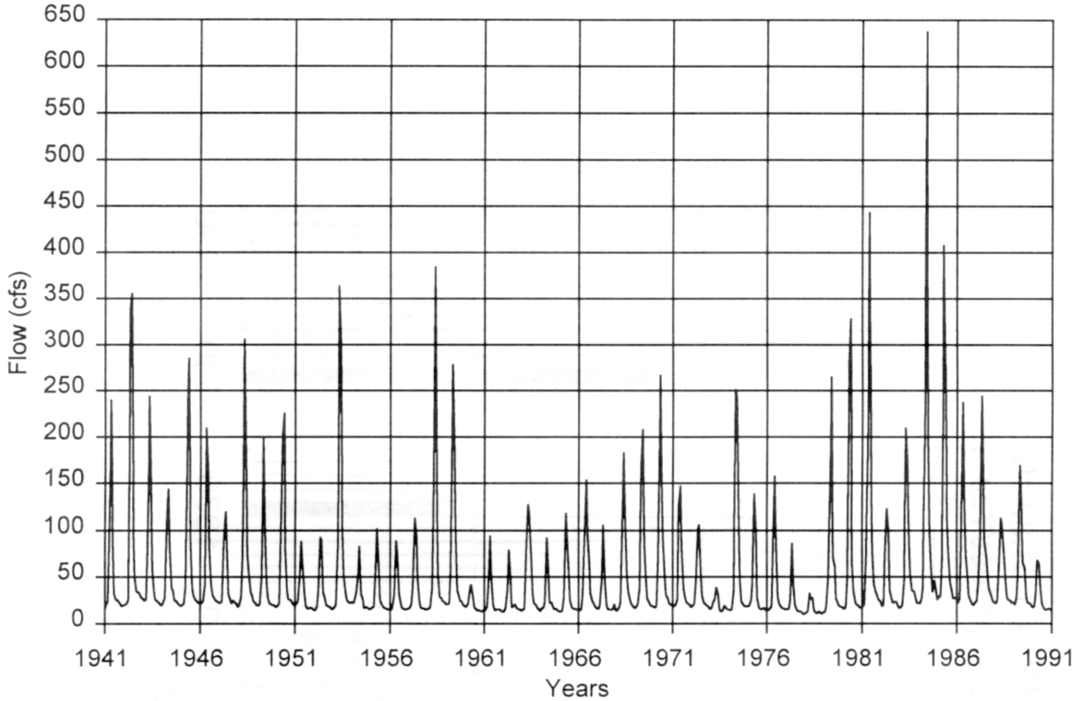


Figure 5-6
MONTHLY MEAN FLOWS
Coal Creek Near Cedar City

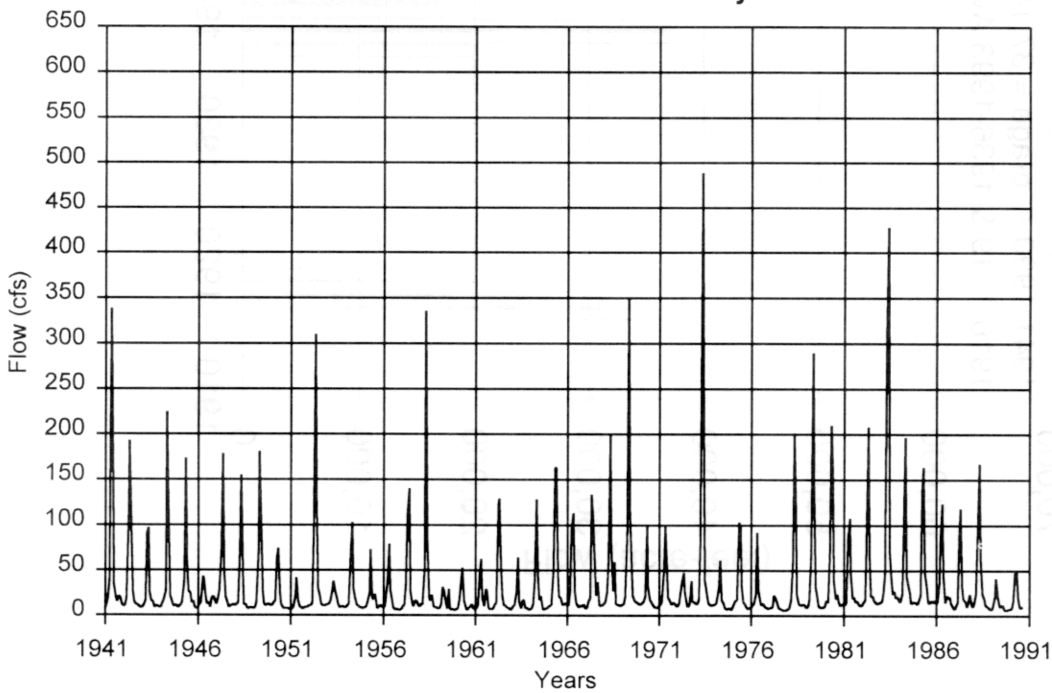


Figure 5-7
MONTHLY STREAMFLOW PROBABILITIES
Beaver River at Beaver

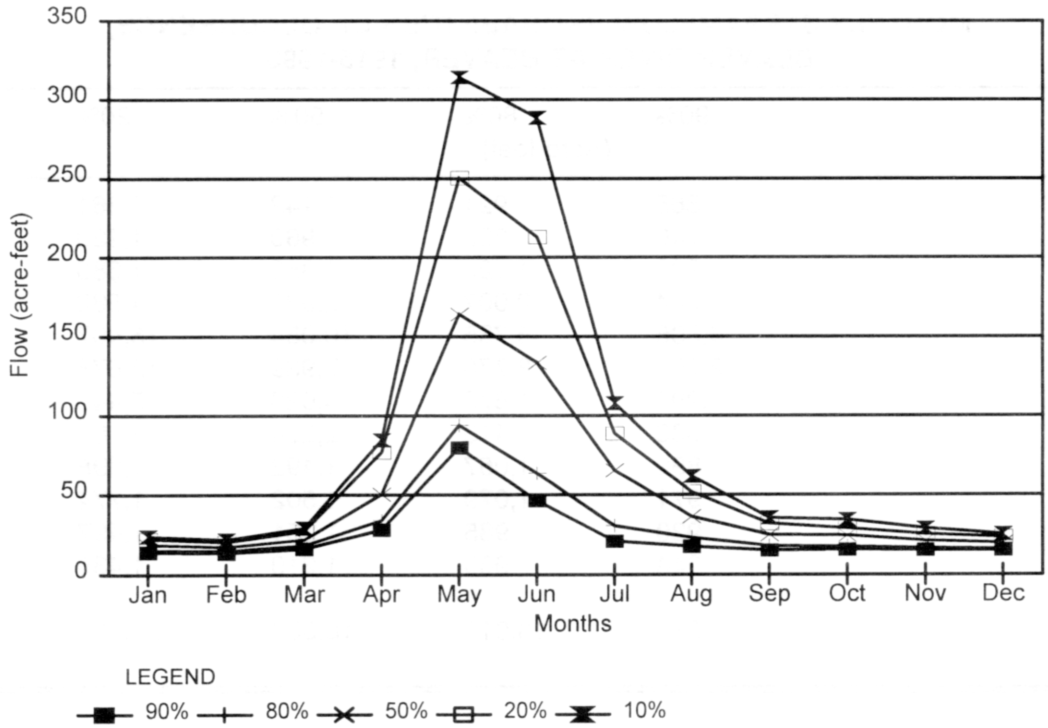


Figure 5-8
MONTHLY STREAMFLOW PROBABILITIES
Coal Creek Near Cedar City

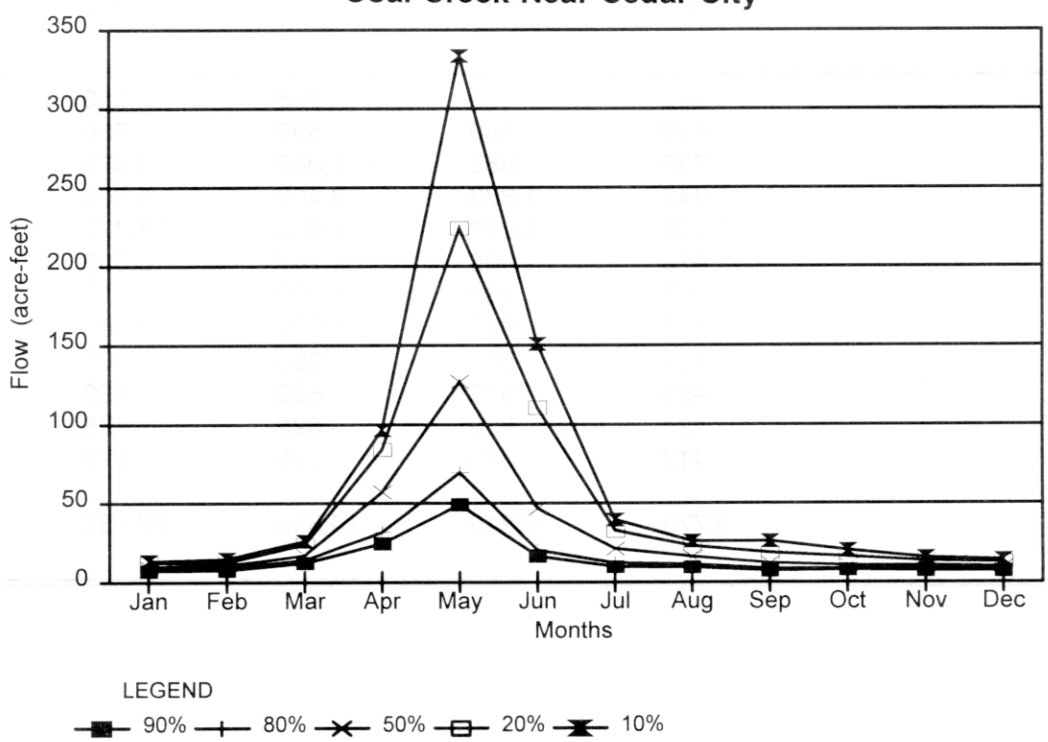


Table 5-2
MONTHLY STREAMFLOW PROBABILITIES OF OCCURRENCE, BEAVER RIVER AT BEAVER, 1915-1993

MONTH	90%	80% (Acre-feet)	50%	20%	10%
January	865	921	1,142	1,361	1,470
February	740	825	960	1,129	1,215
March	989	1,126	1,350	1,680	1,794
April	1,664	2,007	2,985	4,580	5,039
May	4,896	5,785	10,084	15,407	19,330
June	2,752	3,770	7,939	12,676	17.170
July	1,291	1,873	4,023	5,448	6,630
August	1,086	1,413	2,224	3,181	3,789
September	892	1,057	1.492	1,898	2,117
October	971	1,079	1,502	1,774	2,112
November	920	985	1,251	1,497	1,720
December	944	980	1.219	1,435	1,559
Annual	11,388	13,010	18,338	52,351	86,153

Table 5-3
MONTHLY STREAMFLOW PROBABILITIES OF OCCURRENCE, COAL CREEK NEAR CEDAR CITY, 1916-1919 AND 1936-1993

MONTH	90%	80% (Acre-feet)	50%	20%	10%
January	442	459	595	758	826
February	419	480	596	706	824
March	738	862	1,042	1,478	1,607
April	1,447	1,883	3,402	5,006	5,748
May	3,022	4,280	7,813	13,775	20,500
June	975	1,205	2,787	6,582	8,969
July	588	762	1,292	2,017	2,427
August	577	692	1,004	1,404	1,605
September	429	502	720	1,107	1,548
October	480	516	666	990	1,249
November	424	520	625	796	924
December	417	470	595	772	883
Annual	5,770	6,849	10,353	27,656	60,850

Table 5-4
TOP 10 PEAK FLOWS FOR THE BEAVER RIVER AT BEAVER, 1914-1993

Year	Date	Flow (cfs)
1936	July 22, 1936	1080
1984	May 24, 1984	1060
1983	June 19, 1983	940
1979	June 30, 1979	841
1922	May 25, 1922	785
1944	June 8, 1944	780
1920	May 30, 1920	760
1926	May 19, 1926	740
1957	June 6, 1957	732
1914	May 24, 1914	710

Note: Peak flows are the largest for highest 10 years.

Table 5-5
TOP 10 PEAK FLOWS FOR COAL CREEK NEAR CEDAR CITY, 1916-1919 AND 1936-1993

Year	Date	Flow (cfs)
1969	July 23, 1969	4620
1975	July 12, 1975	4440
1985	July 19, 1985	3840
1967	July 16, 1967	3340
1936	July 9, 1936	2910
1989	July 31, 1989	2500
1968	August 8, 1968	2440
1974	July 16, 1974	2400
1958	September 12, 1958	2360
1965	August 17, 1965	2340

Note: Peak flows are the largest for highest 10 years.

Table 5-6
FLOOD FREQUENCY FOR BEAVER RIVER NEAR BEAVER

Return Period	Probability[a]	Value (cfs)
2 Years	50	361.4
5 Years	20	611.9
10 Years	10	782.3
25 Years	4	994.3
50 Years	2	1,147.9
100 Years	1	1,296.6
200 Years	0.5	1,439.9
500 Years	0.2	1,623.5

[a] Computed by Log Pearson Type III Distribution

Table 5-7
FLOOD FREQUENCY FOR COAL CREEK NEAR CEDAR CITY

Return Period	Probability[a]	Value (cfs)
2 Years	50	760.2
5 Years	20	1,674.5
10 Years	10	2,483.6
25 Years	5	3,733.4
50 Years	2	4,822.1
100 Years	1	6,038.4
200 Years	0.5	7,395.1
500 Years	0.2	9,403.7

[a] Computer by Log Pearson Type III Distribution

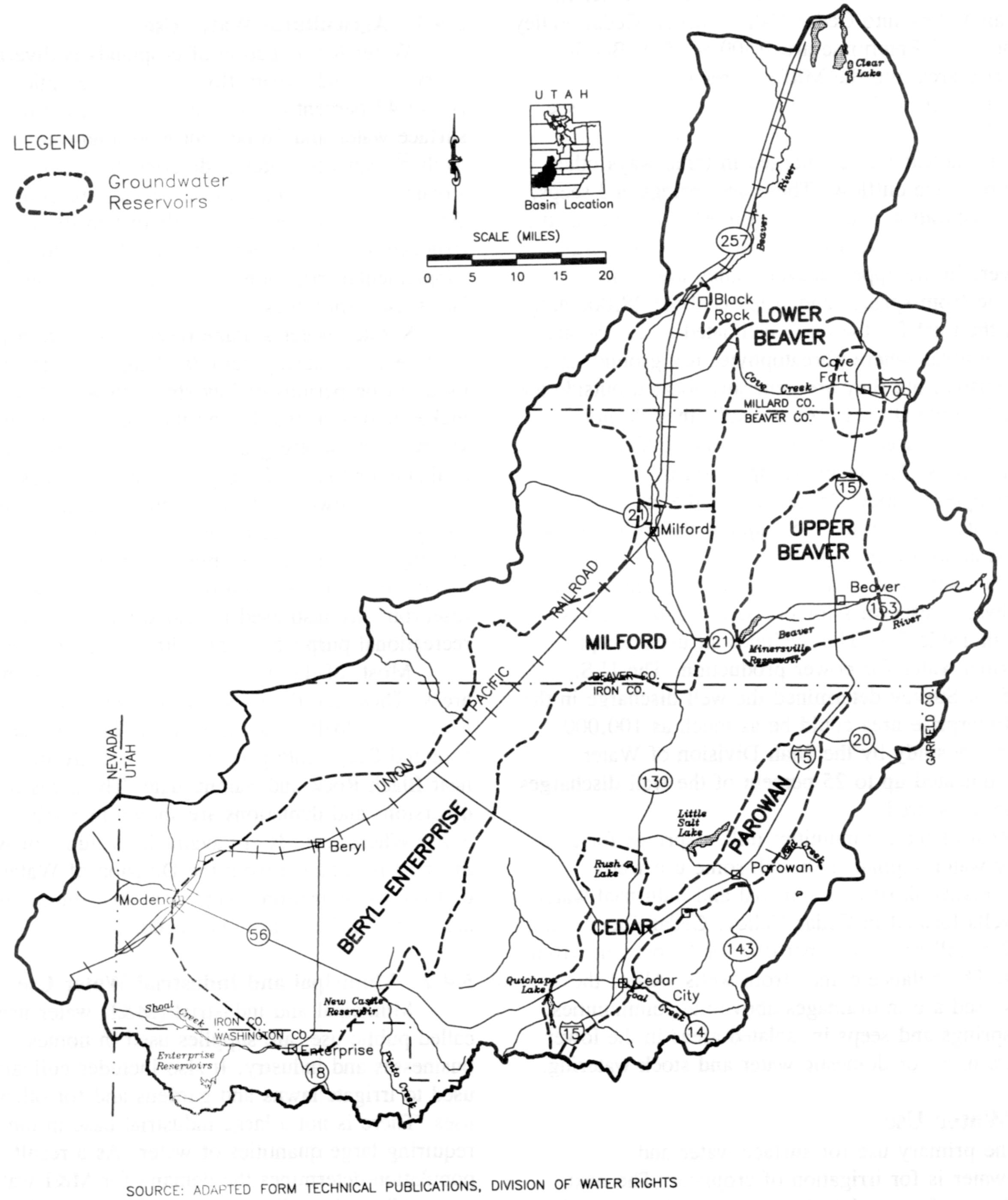
Table 5-8
WATER BUDGET AREA TRIBUTARY INFLOWS[22]

Water Budget Area	Inflow (Acre-feet)
Upper Beaver	57,400
Milford	1,970[a]
Parowan	37,510
Cedar	29,300
Beryl-Enterprise	32,490
Lower Beaver	1,930
TOTAL	160,600

Note: There is also a transbasin diversion from the Santa Clara River drainage into the Enterprise area of 2,616 acre-feet and groundwater inflow from Pavant Valley into Clear Lake of 14,900 acre-feet.

[a] Does not include the Beaver River inflow.

Figure 5-9
GROUNDWATER RESERVOIRS
Cedar/Beaver Basin



SOURCE: ADAPTED FORM TECHNICAL PUBLICATIONS, DIVISION OF WATER RIGHTS

When the level of the groundwater reservoir is high, water will move from one area to another with the volume of movement depending on the groundwater level. In the Cedar/Beaver Basin, groundwater movement estimated by the U.S. Geological Survey is as follows: Beaver area to Milford area (300 ac.-ft.); Parowan Valley into Cedar Valley (neg.); Cedar Valley into the Beryl-Enterprise area (500 ac.-ft.); Beryl-Enterprise area into the Milford area (1,000 ac.-ft.); and outflow from the Milford area (neg.). Also, see Figure 5-1.

Groundwater is discharged in three ways other than subsurface outflow. These are springs and seeps, evapotranspiration and wells. In most of the basin, the springs and seeps are a minor part of the discharge. However, in the upper Beaver Valley area, the discharge from springs and seeps is about 28,000 acre-feet of the total for the basin estimated at 29,250 acre-feet. The areas where phreatophytes use groundwater are extensive, but they are generally located outside the irrigated cropland areas. As a result, they do not always have a large effect on the water budget determinations. The evapotranspiration by phreatophytes is about 25 percent of the total groundwater discharge. The major withdrawals in the irrigated areas are from wells.

The average discharge from wells in each of the groundwater reservoirs for the period 1964-1993 is shown in Table 5-9. This includes all uses except geothermal water for power production. The U.S. Geological Survey determined the well discharge in the Beryl-Enterprise area could be as much as 100,000 acre-feet. A study by the Utah Division of Water Rights indicated up to 25 percent of the well discharges were not measured.

Most of the communities utilize springs for their culinary water supplies although some use wells. Enoch obtains all of its municipal and industrial water from wells located in Cedar Valley. Cedar City obtains about 2.5 million gallons per day, or 65 percent, from springs. The balance comes from wells. All of the springs used are in drainages above the communities. Some springs and seeps in isolated areas in the lower areas are used for domestic water and stock watering.

5.4 Water Use

The primary use for surface water and groundwater is for irrigation of cropland. The next largest use is for municipal and industrial needs, which includes culinary and industrial (including self-supplied) uses. These are followed by smaller water uses, including private domestic and livestock. The latter are generally small wells around ranches and in rangeland areas. A substantial amount of water is also consumptively used by phreatopytes and riparian vegetation. Power generation is an important although non-consumptive use.

5.4.1 Agricultural Water Use

Water for irrigation of croplands is diverted from every river and stream flowing into the valley areas. About 42 percent of the water diverted for irrigation is surface water and 58 percent is groundwater from wells.[22] Surface water is diverted from direct streamflows and from surface storage reservoirs. Groundwater comes from wells drilled throughout the irrigated area. Some wells are used only to supply supplemental irrigation water during the drier years for late season shortages.

Surface water storage reservoirs make it possible to store water during periods of high runoff so it can be used during periods of low streamflows. This also makes irrigation feasible on the higher areas of the valley floors where groundwater is generally not available or too costly to pump. Without these reservoirs, however, flows would continue to the lower valley areas and become recharge to groundwater. The existing surface water storage reservoirs are shown in Section 6, Table 6-1 and on Figure 6-1. Many of the reservoirs are also used for flood control and recreational purposes along with agricultural uses.

Most of the irrigated lands are in five major areas. These are the upper Beaver River area, Minersville-Milford area, Parowan area, Cedar Valley area and Beryl-Enterprise area. There are minor areas near Black Rock and Sulphurdale. The areas of land, diversions and depletions are shown in Table 5-10. Where records are available, volume of water diverted is obtained from the Division of Water Rights or from the irrigation companies. Irrigation companies are shown in Section 6, Management.

5.4.2 Municipal and Industrial Water Use

Municipal and industrial (M&I) water use, also called public use, are supplies used in homes, businesses and industry. It also includes culinary water used to irrigate lawns and gardens and for other outside uses. There is not a large industrial base in the basin requiring large quantities of water. As a result, population determines the demand for M&I water.

All of the culinary water used comes from groundwater, either springs or wells. In some cases, these are treated by chlorination to bring them up to

Table 5-9
GROUNDWATER DISCHARGE FROM WELLS[18]

Groundwater Reservoirs	Discharge[a] (Acre-feet)
Upper Beaver	8,230
Milford	50,140
Parowan	25,430
Cedar Valley	28,390
Beryl-Enterprise	76,470
Lower Beaver	3,210[22]
TOTAL	191,870

[a] All uses, 30-year average.

standard. Refer to Section 11, Drinking Water, for more information.

The Division of Water Rights collects data under the Utah Water Use Program[26] in cooperation with the U.S. Geological Survey. Data are collected from public water suppliers and industries using self-supplied water.

There are eight hydroelectric power plants and two geothermal power plants in the basin.[32] A total of eight plants are now in operation. See Section 18 for more information.

The diversions and depletions for current culinary water use are summarized by county in Table 5-11. Depletions are calculated as a percentage of the water diverted which does not return to the river or stream system. This data shows the estimated total use, which includes the public community water supplies as well as use by small private and domestic systems.

5.4.3 Secondary Water Use

Water from secondary (dual) systems is used to irrigate lawns and gardens, parks, cemeteries and golf courses. These systems use untreated water and may be owned and operated by municipalities, irrigation companies, special service districts or other entities. Communities with secondary systems include Beaver, Paragonah, Parowan, Summit, New Castle and part of Cedar City. Other communities, special service districts and entities have installed secondary water systems to serve selected areas. Estimates of diversions and depletions for current secondary water use are summarized in Table 5-12.

5.4.4 Wetland and Riparian Water Use

Wetland and riparian areas include land and vegetation adjacent to rivers, streams, springs, bogs wet meadows, lakes and ponds. These areas account for about 1 percent of the total land area. Wetlands and riparian areas are important habitat for migrating waterfowl and raptors during the winter months. They are also important for year-long wildlife residents. The Clear Lake Waterfowl Management Area is very important for waterfowl in the Pacific Flyway. Other areas used for nesting and resting include Rush Lake, Quichapa Lake and Little Salt Lake during wetter years.

5.5 Interbasin Diversions

The interbasin diversion from the Santa Clara River (Grass Valley) in the Virgin River Basin into Pinto Creek (Stream gage 09408500) is the only one in the Cedar/Beaver Basin. This diversion has historically averaged about 2,600 acre-feet annually.

Groundwater inflow from the Sevier River Basin into the Cedar/Beaver Basin has been estimated at 2,000 acre-feet annually. This was determined during a study of the water and related-land resources of the Sevier River Basin during the 1960s.[63] The average flow of Clear Lake Springs is about 14,900 acre-feet annually. The source of most of this water is groundwater outflow from Pavant Valley in the Flowell area.

5.6 Water Quality

Streams in the Cedar/Beaver Basin originate in areas that are considerably different from each other in geology, land use, vegetation and altitude. This effects the quality of water flowing from a given area.

The quality of the groundwater reservoirs is impacted by the recharge water. This water comes from surface tributary inflow recharging the groundwater as it flows over alluvial fans and from groundwater tributary inflow. Groundwater is also supplied by losses from surface streams, canals and deep percolation from irrigation of croplands.

The quality of surface water and groundwater supplies varies throughout the basin. This affects the use and management of these water resources. Refer to Sections 12 and 19 for data on the water quality. ■ ■

Table 5-10
CURRENT IRRIGATION WATER USE[17,22]

Basin/County	Area[a] (Acres)	Diversions (Acre-feet)	Depletions[b] (Acre-feet)
Upper Beaver	16,590	38,730	20,670
Lower Beaver	1,070	2,910	1,350
Minersville-Milford	21,450	83,840	36,350
Total-Beaver County	39,110	125,480	58,370
Lower Beaver	380	1,030	460
Total-Millard County	380	1,030	460
Parowan Valley	19,060	37,790	32,640
Cedar Valley	17,000	44,030	22,550
Beryl	32,680	102,380	59,990
Total-Iron County	68,740	184,200	115,180
Enterprise	2,580	8,080	4,730
Total-Washington County	2,580	8,080	4,730
BASIN TOTAL	110,810	318,790	178,740

[a] Acreages include fallow and idle overgrown areas.
[b] Depletions do not include precipitation.

Table 5-11
CURRENT CULINARY WATER USE[19]

County	Diversions (Acre-feet)	Depletions (Acre-feet)
Beaver	1,580	820
Iron	6,360	3,310
Washington	670	350
TOTAL	8,610	4,480

Note: Data is based on 1992 values.

Table 5-12
CURRENT SECONDARY WATER USE[19]

County	Diversions (Acre-feet)	Depletions (Acre-feet)
Beaver	1,350	810
Iron	1,980	1,190
Washington	-0-	-0-
TOTAL	3,330	2,000

Note: Data is based on 1992 values.